Vidifox® Document Camera

DV 480

USER MANUAL

Please read this User Manual thoroughly before you use the document camera. Keep the CD-ROM in a convenient place so you can use it quickly if you need to.

Please visit us at http://www.waninusa.com where you can get product support, the latest driver updates, and answers to frequently asked questions (FAQs) and technical questions.

PRECAUTIONS

NOTICES: PLEASE READ CAREFULLY BEFORE USE

- Use the document camera under the rated electric conditions.
- Do not place the document camera on any unstable surface. It may fall and cause injuries or damages.
- Do not place this device directly under sunlight or near heaters.
- Do not place this device near water.
- Keep the camera away from acid or alkali gas.
- Do not place this document camera in humid, dusty, windy or vibrant locations.
- The recommended operating environment is:

  Temperature: 32ºF-113ºF (0ºC--45ºC)

  Humidity: less than 75%
- Always unplug BEFORE cleaning the device. Use a damp soft-cloth for cleaning. Do not use volatile solvent.
- When this equipment functions abnormally, such as smoke, smell, noise, immediately unplug and call for professional assistance.
- Unplug the document camera or shut off the power when not in use.

Legal Notice

FCC Part 15

This device complies with Part 15 of the FCC Rules. Operation of this product is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

Compilation and Publication Notice

This manual has been compiled and published to cover the latest product's descriptions and specifications. The contents of this manual and the specifications of this product are subject to change without notice.

Wanin USA reserves the right to make changes without notice in the specifications and materials contained herein and shall not be responsible for any damages (including consequential) caused by reliance on the materials presented, including but not limited to typographical and other errors relating to the publication.

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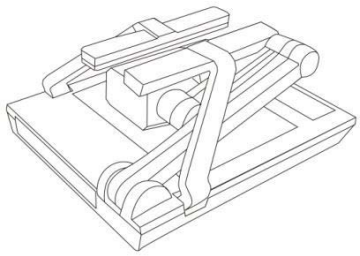
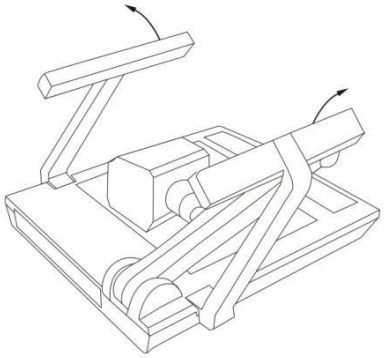
BASIC SETUP

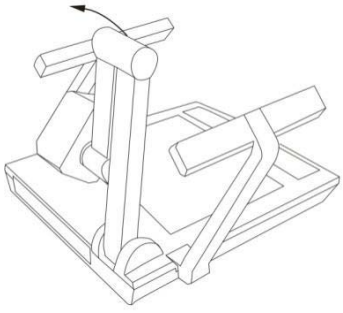
1. Unpack, put aside all packing materials.



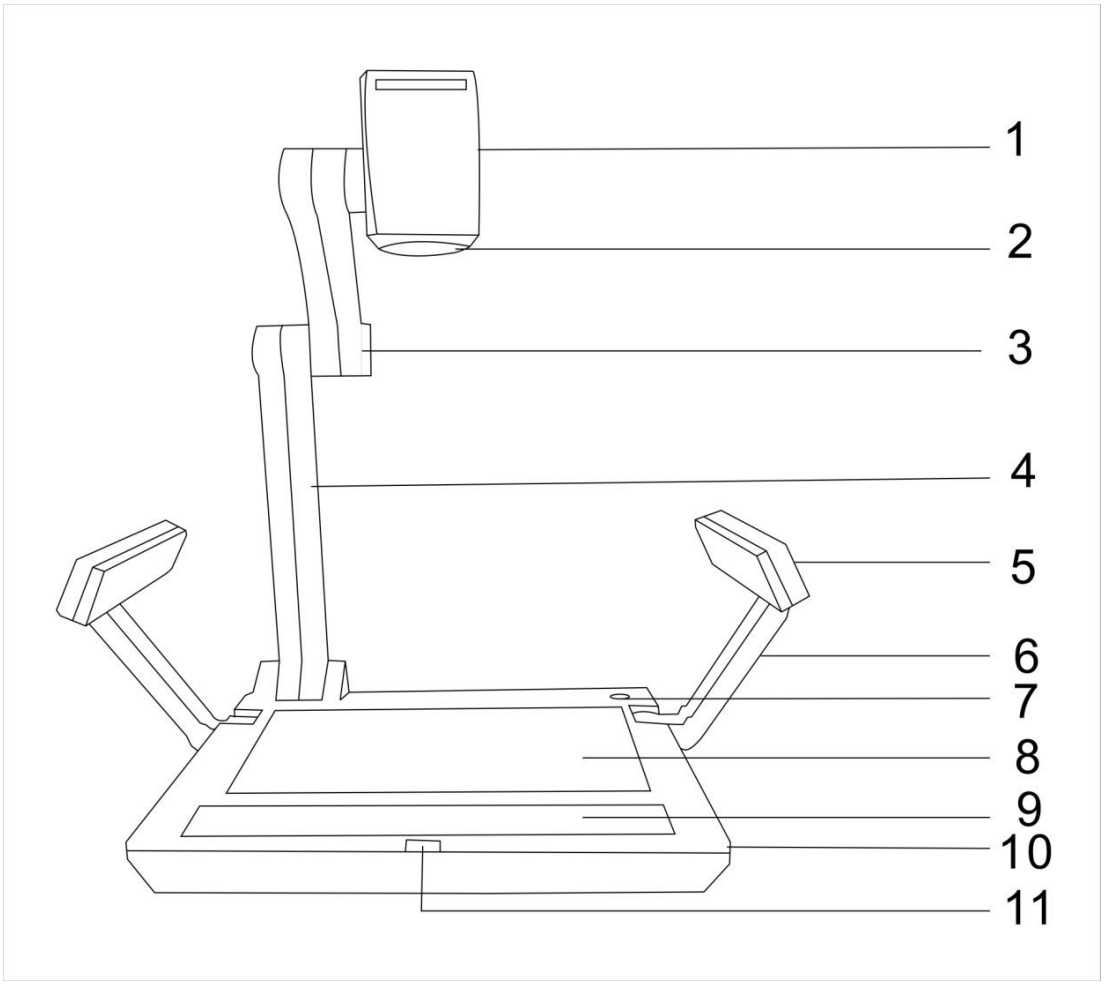
2. Unfold the light arms until reaching the end position.



3. Raise the camera arm completely. Rotate the camera head until the lens face the center of the base unit.

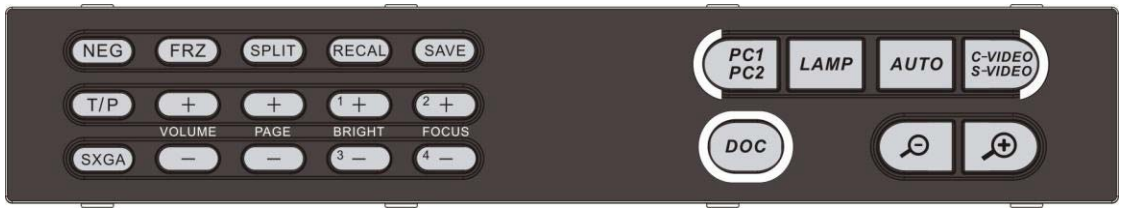


PARTS IDENTIFICATION



1. camera cover
2. camera lens
3. upper mechanical arm
4. main mechanical arm
5. side lamp
6. lighting arm
7. power switch
8. base light
9. control panel
10. base unit
11. infrared receiver

CONTROL PANEL



DOC: Press this button for shorter than 3 seconds to display the image on the platform. If pressing **DOC** for longer than 3 seconds, the camera will stop transmitting image and go to standby; pressing for another 3 seconds, the camera will come back to work.

C-VIDEO S-VIDEO: Switch the input between Composite Video and S-Video.

PC1 PC2: Switch the input between PC1 and PC2.

LAMP: Switch between arm light, back light and no light.

AUTO: Carry out auto focus, color adjustment and white balance adjustment.

ZOOM+, ZOOM-: Image zoom in and zoom out control.

NEG: Switch the image mode between positive and negative.

FRZ: Freeze and unfreeze the image.

SPLIT: Split screen, enable comparison between the frozen image and live image.

RECAL: Display saved images.

SAVE: Save the current image.

T/P: Switch the output image between the text mode and picture mode

SXGA: Switch the output signal between XGA (1024 x 768) and SXGA (1280 x 1024)

VOLUME+, VOLUME-: Output volume control

PAGE+, PAGE-: Navigate between pages in Image Recall mode.

BRIGHT+, BRIGHT-: Image brightness adjustment

FOCUS+, FOCUS-: Adjust focus manually, focus far and focus near.

In the Image Recall mode:

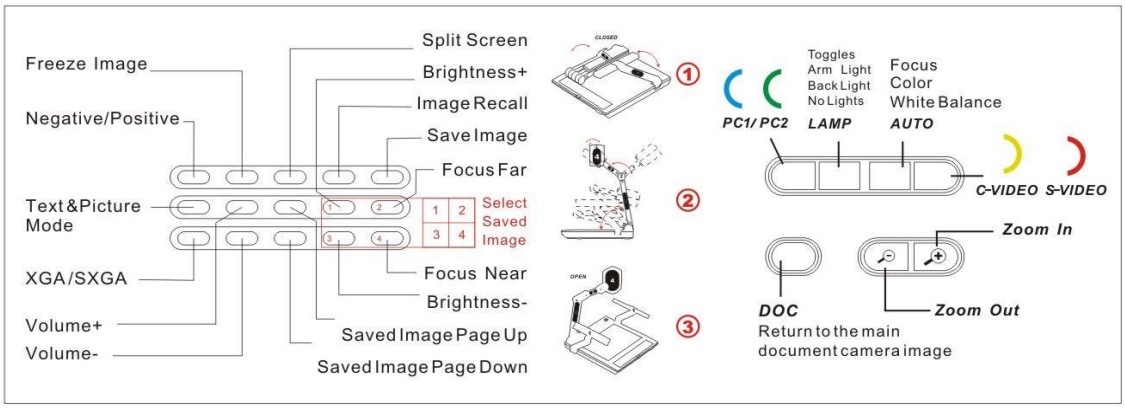
1 (BRIGHT+): Display the first image.

2 (FOCUS+): Display the second image.

3 (BRIGHT-): Display the third image.

4 (FOCUS-): Display the fourth image.

BUTTON INSTRUCTION



REMOTE CONTROL

1. **Home:** Press for shorter than 3 seconds to output the current image of the camera. Press this button for longer than 3 seconds to adjust color and white balance automatically.
2. **PC:** Switch the input VGA source between PC1 and PC2.
3. **Video:** Switch the input Video signal source between video1 and video2.
4. **Text:** Switch the image between the text mode and image mode. Text mode

enhances the black and white contrast to increase the readability of the text.

5. **FRZ:** Freeze and unfreeze the image.
6. **P/N:** Switch the image between positive and negative mode.
7. **MIR:** Switch the output image between the right/left mirrored image, up/down mirrored image and original image.
8. **Lamp:** Switch between arm light, back light and no light.
9. **DIV:** Activate the Split Screen function to allow side by side comparison of the frozen image and live image.
10. **Save:** Save the image in display to memory.
11. **Multi:** Multi-image mode enabled. Press again, back to the normal mode. In the multi-image mode:

PC/1: Display the first image.
Video/2: Display the second image.
Text/3: Display the third image. **FRZ/4** : Display the fourth image.

12. **Flip:** Turn page in multi-image mode.
13. **BRT:** Image brightness adjustment.
14. **Zoom:** Image zoom in and zoom out control.

CONNECTION TERMINALS

L1, R1: Audio input of Composite Video input
L2, R2: Audio input of S-Video input
VID IN: Composite Video input
S-VID IN: S-Video input
VID OUT: Composite Video output
S-VID OUT: S-Video output

MIC：Microphone input

RGB AUDIO IN 1/2: Audio input for RGB input 1/2

AUDIO OUT: Audio output

RGB IN 1/2: RGB signal input 1/2 (15 pin D-SUB)

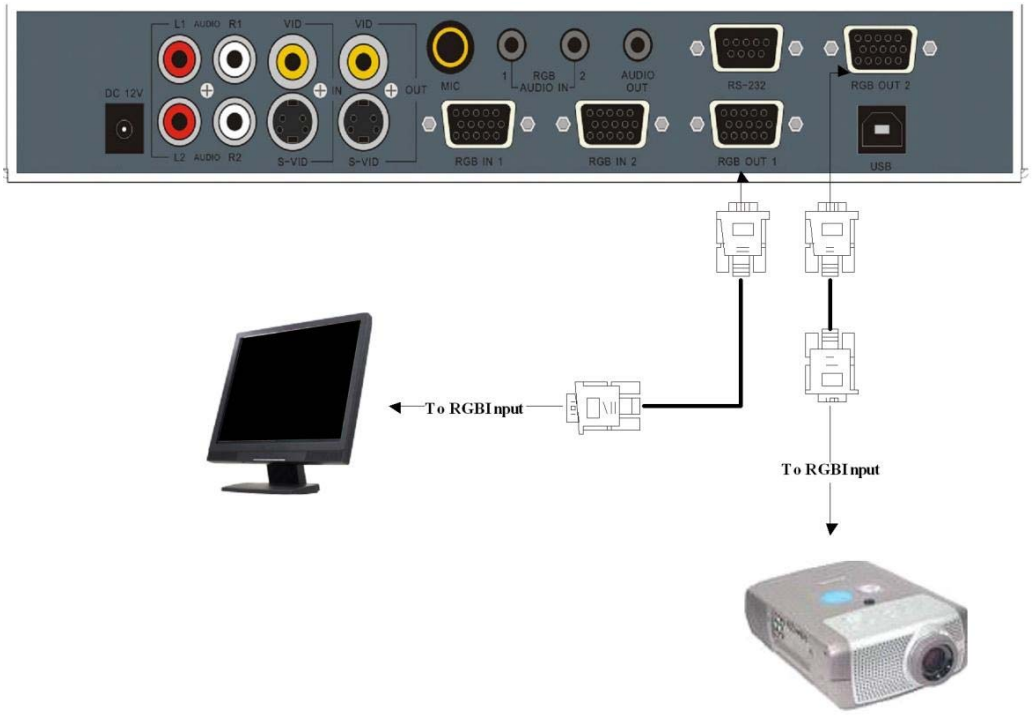
RGB OUT 1/2: RGB signal output 1/2 (15 pin D-SUB)

RS-232: Allow a computer or external control system to control the document camera via this port.

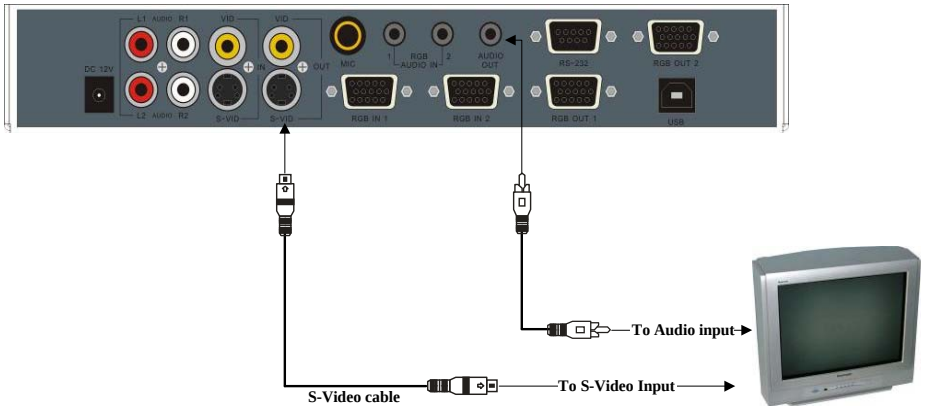
USB: Capture images and video into a connected computer via provided software

MAKING CONNECTIONS

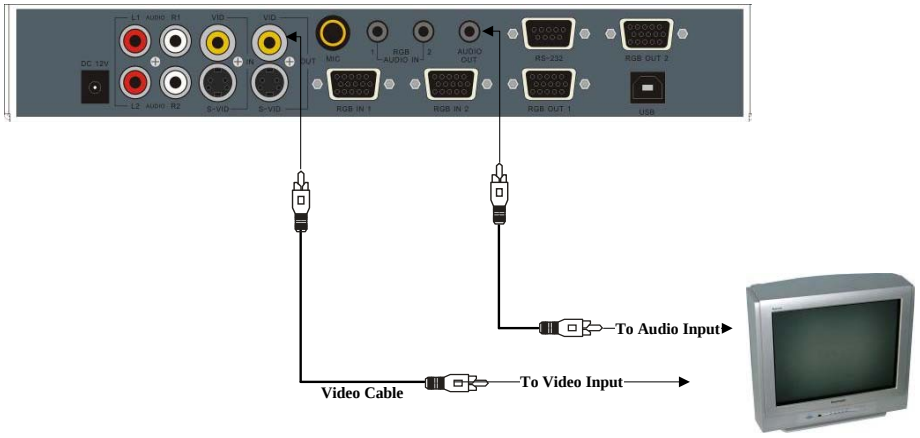
1. VGA output connection



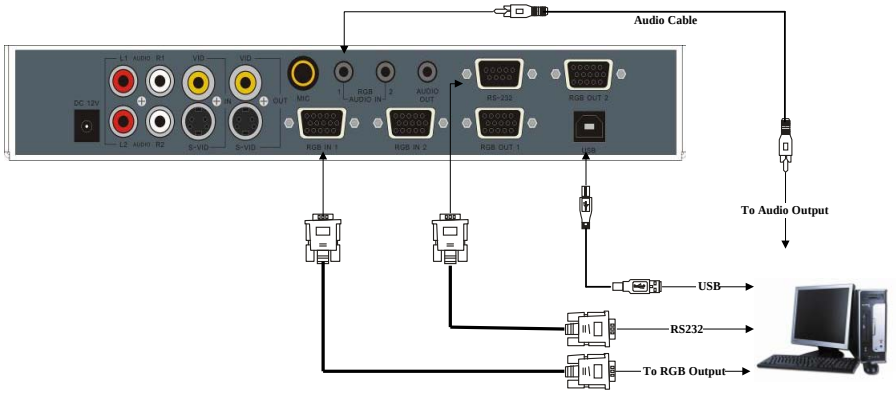
2. S-Video output connection



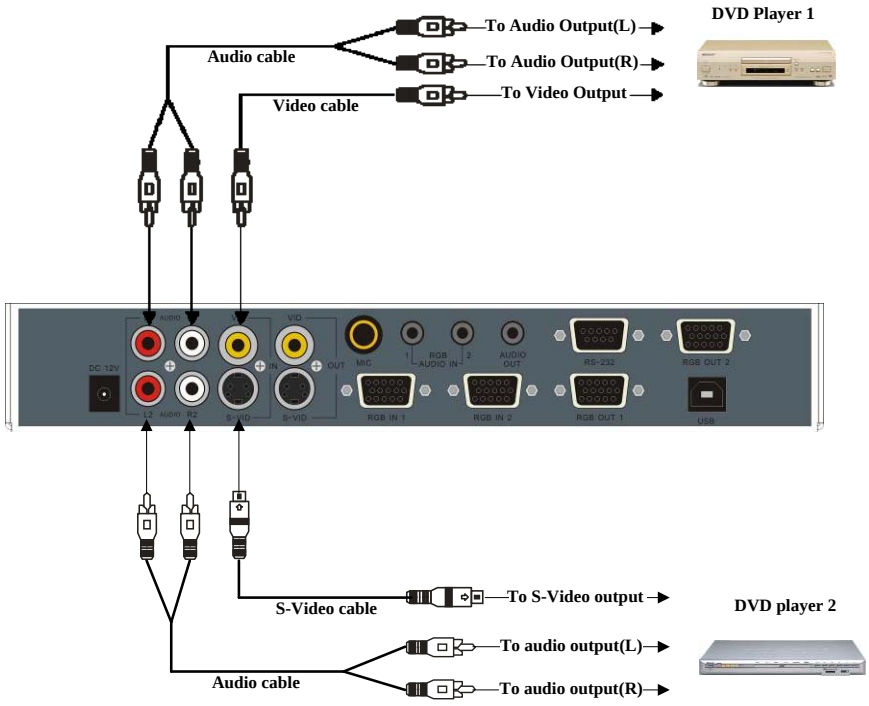
3. Composite Video output connection



4. Computer connection



5. DVD or other video input connection



Access Basic Functions:

1. **General**
   a. Turn on the power switch.
   b. Place the target object on the base unit surface.
   c. Adjust the image displayed by pressing the **ZOOM+**, **ZOOM-** buttons on the control panel.
   d. Press the **AUTO** button for automatic focus.
   e. The **FRZ** button can be used to lock the image while changing displayed materials.
   f. **SPLIT** button can be used to compare a previous captured image with the current image side by side.

2. **Showing text image**

For sharper image, engage the text mode by pressing the T/P button.

3. **Showing the 3D objects:**
   Use the **FOCUS+** and **FOCUS-** buttons on the control panel to manually focus on any part of the 3D object.

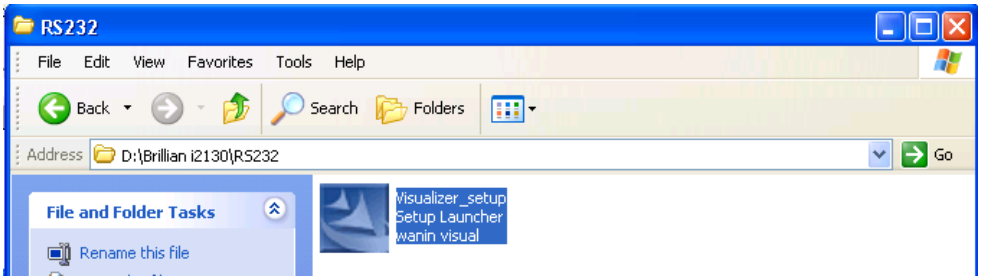
4. **Showing the transparent material such as an overhead transparency**
   Press the **LAMP** button until the built-in light box is on.

OUTPUT FORMAT

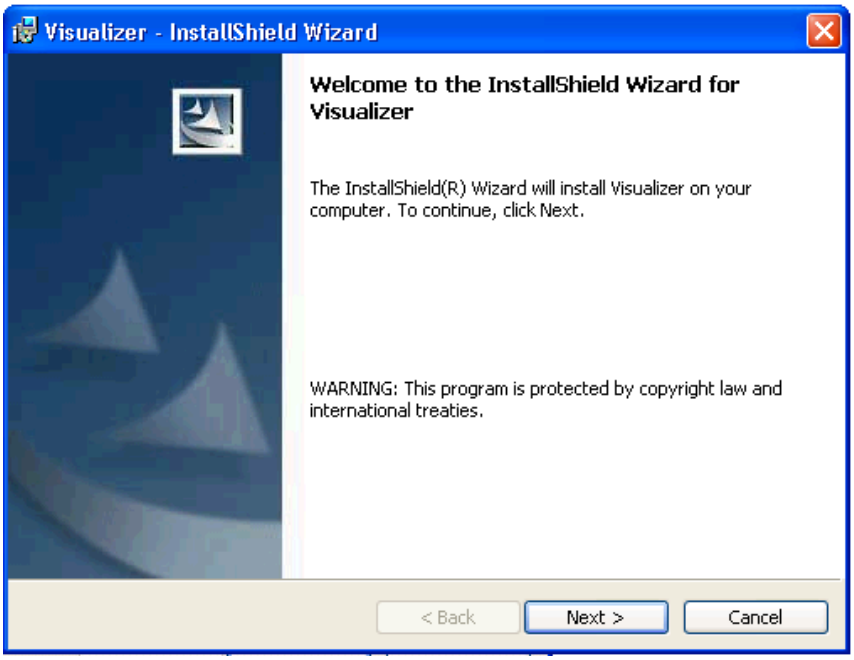
The RGB output can output a signal in the SXGA or XGA format.
In order to achieve the best picture quality you must set the output format of the DV 480 to match the native resolution of your display unit.

SOFTWARE INSTALLATION

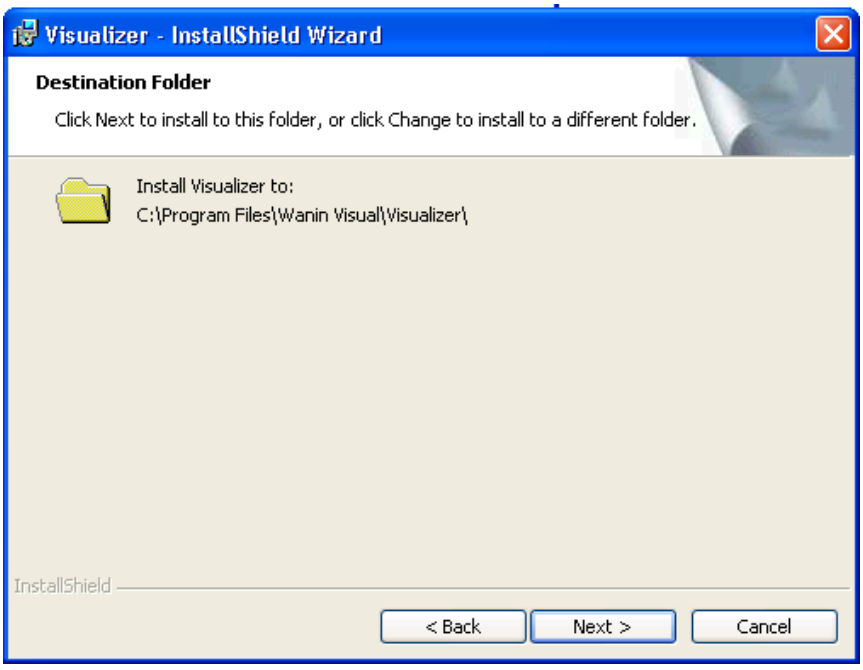
Insert the provided CD-ROM into your computer.
Open the RS232 folder and double click the DV 480_setup to run the install shield wizard.



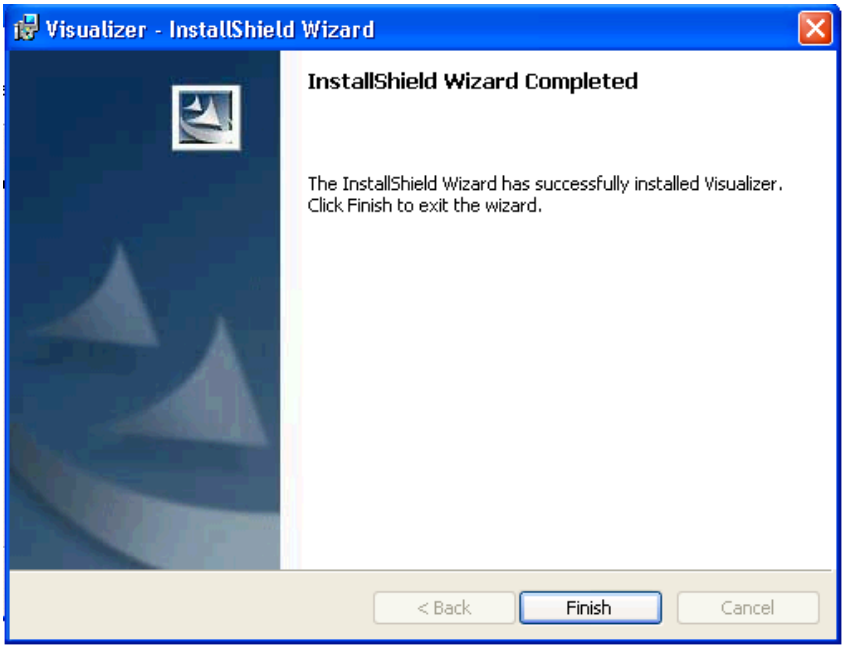
Then you will see the software setup window:


Visualizer - InstallShield Wizard
Welcome to the InstallShield Wizard for Visualizer
The InstallShield(R) Wizard will install Visualizer on your computer. To continue, click Next.
WARNING: This program is protected by copyright law and international treaties.
< Back
Next >
Cancel

Click *Next*>, you will see:


Visualizer - InstallShield Wizard
Destination Folder
Click Next to install to this folder, or click Change to install to a different folder.
Install Visualizer to:
C:\Program Files\Wanin Visual\Visualizer\
InstallShield
< Back
Next >
Cancel

Click *Next*>, you will see:


Visualizer - InstallShield Wizard
InstallShield Wizard Completed
The InstallShield Wizard has successfully installed Visualizer. Click Finish to exit the wizard.
< Back
Finish
Cancel

Click Finish to finish software installation.

Please pay attention to the following:

1. Computer hardware requirement: CPU: 2.4GHz, RAM: 256M or above, Graphic card 64M, USB 2.0 port, Hard disk 40G or more, Monitor display resolution higher than XGA (1024 x 768).
2. Operating system: Windows XP SP2 (Service Pack 2), Windows Vista, and Windows 7.
3. Must use the high-speed USB cable provided with the DV 480.

WORKING ON THE PLATFORM

1. Place your material on the working surface.
2. Select the enlargement desired with the "**ZOOM+**" and "**ZOOM-**" keys.
3. Adjust the focus with the "**FOCUS+**" and "**FOCUS**-" keys or **"AUTO"** key.

WORKING OUTSIDE THE PLATFORM

For showing 3-dimensional objects with the DV 480, place them on the platform and adjust the "**FOCUS+**" or "**FOCUS**-" and **"AUTO"** keys. If the object is too big for the platform or you want to show it from the side, just place it behind or in front of the unit and

tilt the camera by hand.

LIGHT

Press **“LAMP”** to switch between arm light, back light and no light.

ZOOM IN AND ZOOM OUT

Press "**ZOOM+"or "ZOOM-"**

POSITIVE/NEGATIVE CONVERSION

Press the **N/P** button, the output image will be converted to negative color. Press it again, the output image will be converted back to original color.

FOCUS ADJUSTMENT

When the DV 480 is turned on, the focus automatically adjusts to the stage. It is usually not necessary to re-adjust the focus if you are only working with flat materials (text, photos, etc.). Only 3D objects require a focus adjustment.
Press the **“AUTO”** button to auto focus.
Press the "**FOCUS+"** or **"FOCUS-"** button to focus manually.

BRIGHTNESS ADJUSTMENT

If the image effect is not satisfactory, you can adjust the brightness to get a better image effect. To increase the brightness, press the **“BRIGHT+”** button. To decrease it, press the **“BRIGHT-”** button. To go back to the initial brightness, press the **“AUTO”** button.

WHITE BALANCE ADJUSTMENT

Each time the lighting condition changes, the user should adjust the white balance of the image. Press the **“AUTO”** button to adjust the white balance automatically.

TEXT/IMAGE MODE

The Text enhancement feature provides the option to improve the readability of the text by improving the contrast of the image by pressing the “**T/P**” button.

COLOR ADJUSTMENT

To adjust white balance automatically, (a) press **"AUTO"** button on the control panel, or (b) press the "**Home**" button on the remote control for 3 seconds.

IMAGE FREEZE

The freeze function allows you to discretely prepare the next image without interrupting current presentation. Press "**FRZ"** to freeze and unfreeze the image.

IMAGE MIRROR

Press **“MIR”** to vertically reverse the image.

SPLIT SCREEN

Press **“Split”** to compare two images or compare two different views of one object side by side.

IMAGE SAVE

The DV 480 offers the opportunity of storing 12 images on board. Press "**Save"** to capture the image currently displayed.

IMAGE RECALL

To display saved images,

(a) press “**RECAL**” button, thumbnails of saved images are displayed;

(b) use “**Page+**” and press one of the numerical buttons on the control panel or remote control.

RGB Input Switch

Press the **“PC1 PC2”** key to toggle between the two VGA input ports.

Video Input Switch

Press the **“C-VIDEO S-VIDEO”** key to switch between Composite Video & S-Video ports.

USB 2.0 PORT

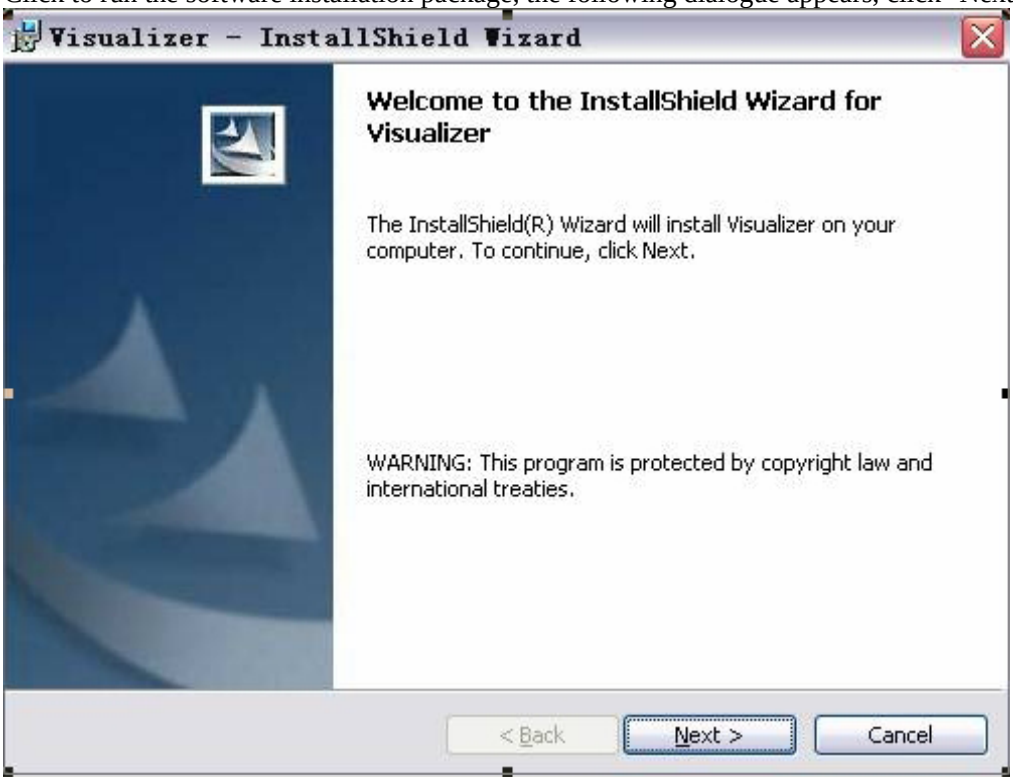
The USB port can be used to capture still images from the DV 480 into a computer. In this way, the DV 480 can be used as a 3-D scanner for your computer.

Connect the DV 480 to your computer with the supplied USB cable. The capture software is available on the supplied CD-ROM.

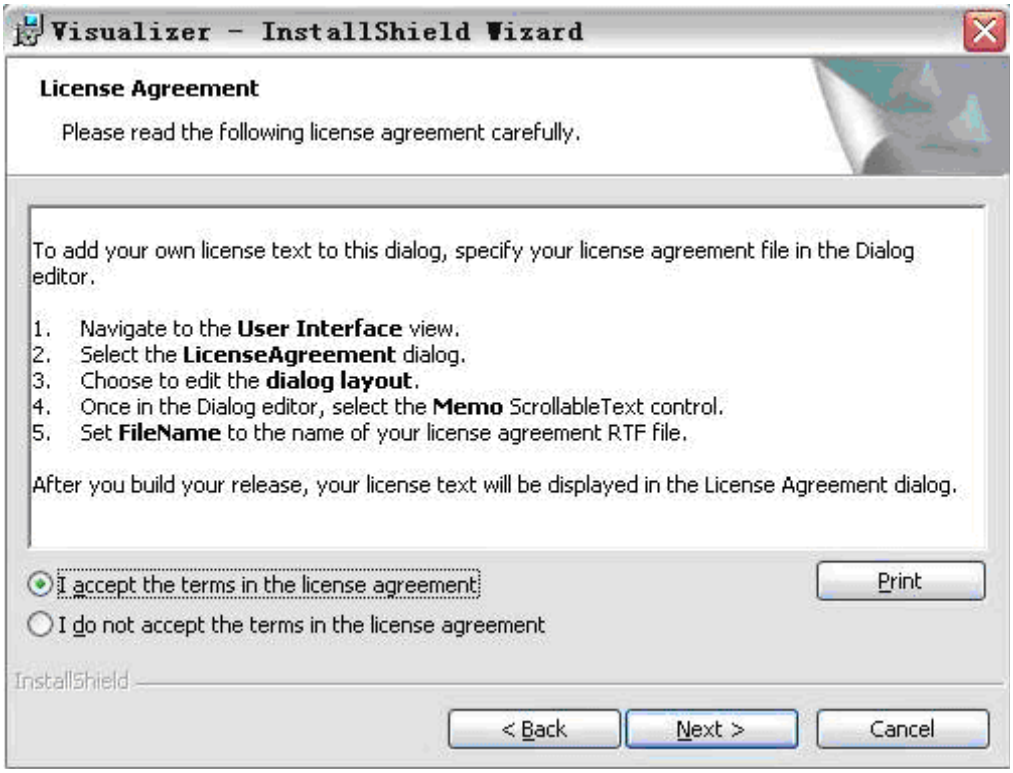
USB IMAGE CAPTURE AND VIDEO RECORDING

1、SOFTWARE INSTALLATION

Click to run the software installation package, the following dialogue appears, click "Next":


Visualizer - InstallShield Wizard
Welcome to the InstallShield Wizard for Visualizer
The InstallShield(R) Wizard will install Visualizer on your computer. To continue, click Next.
WARNING: This program is protected by copyright law and international treaties.
< Back
Next >
Cancel

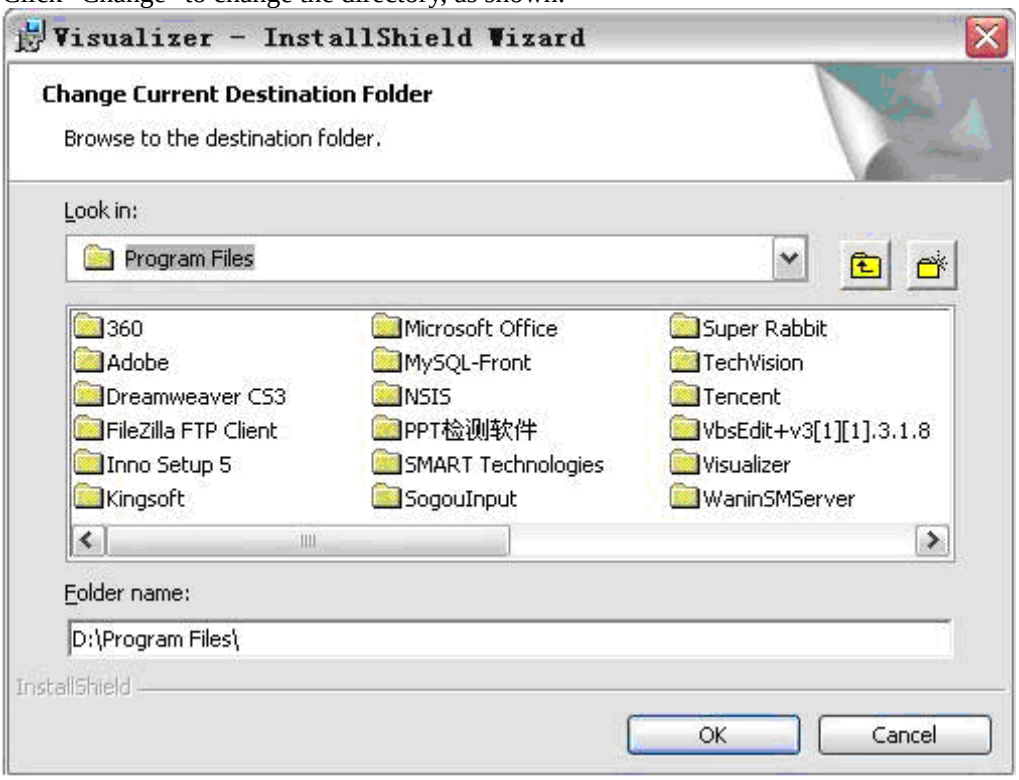
Read the terms, Select "I accept the terms in the license agreement." Click "Next", as the following figure.


Visualizer - InstallShield Wizard
License Agreement
Please read the following license agreement carefully.
To add your own license text to this dialog, specify your license agreement file in the Dialog editor.
1. Navigate to the User Interface view.
2. Select the LicenseAgreement dialog.
3. Choose to edit the dialog layout.
4. Once in the Dialog editor, select the Memo ScrollableText control.
5. Set FileName to the name of your license agreement RTF file.
After you build your release, your license text will be displayed in the License Agreement dialog.
I accept the terms in the license agreement
I do not accept the terms in the license agreement
Print
InstallShield
< Back
Next >
Cancel

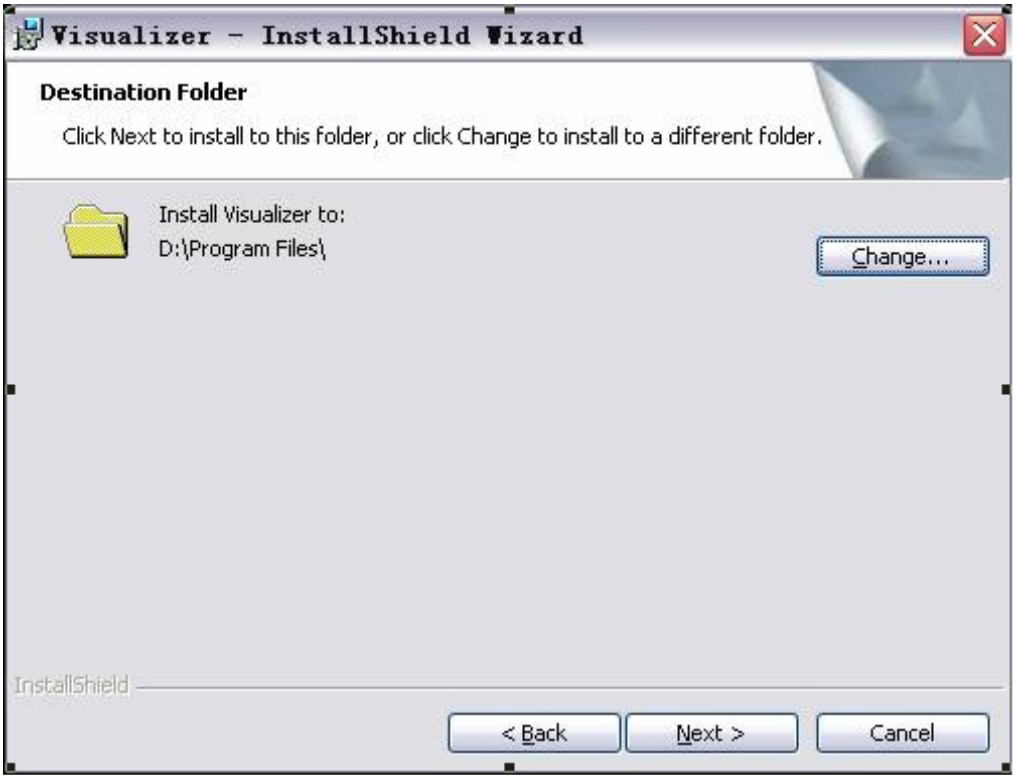
The following dialogue box appears, click "Next":

The default installation directory is Program Files, C: \ Program Files \, you can select a different installation directory, as shown:

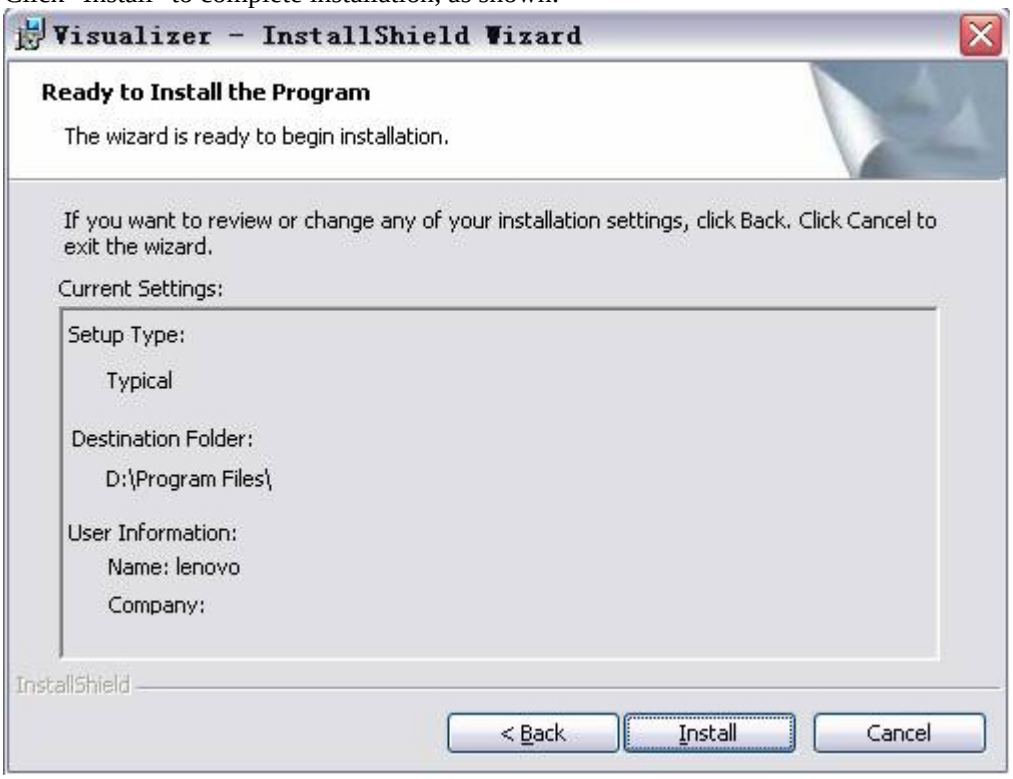
Click "Change" to change the directory, as shown:



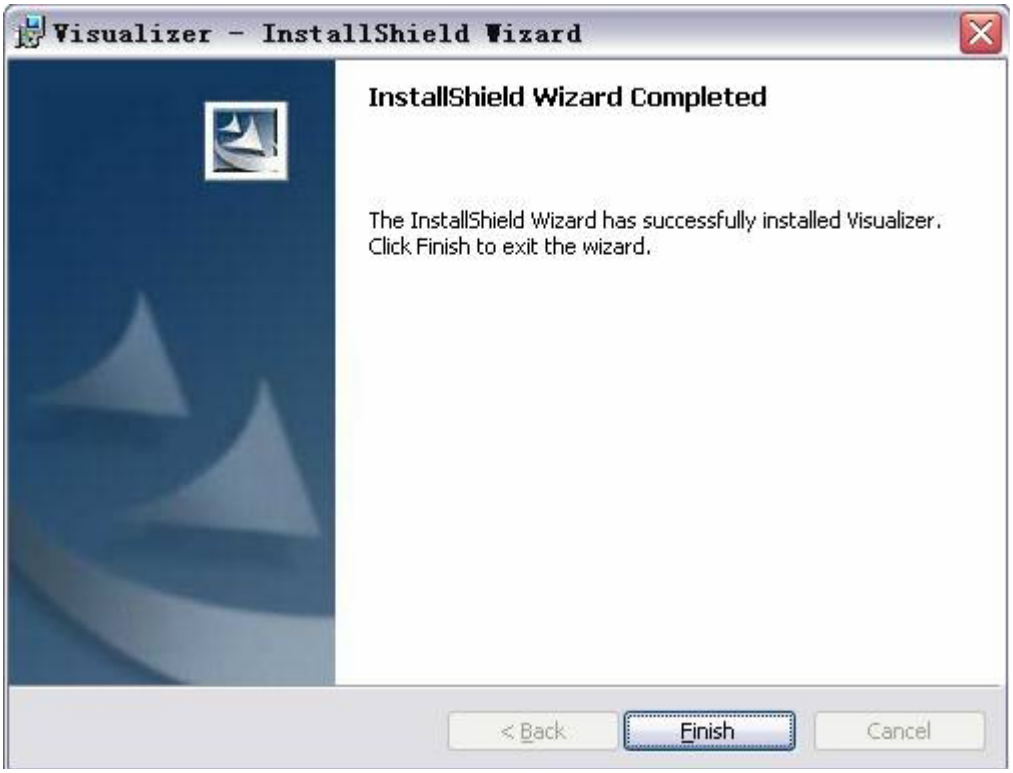
Click "OK", the following figure appears. Click "Next".



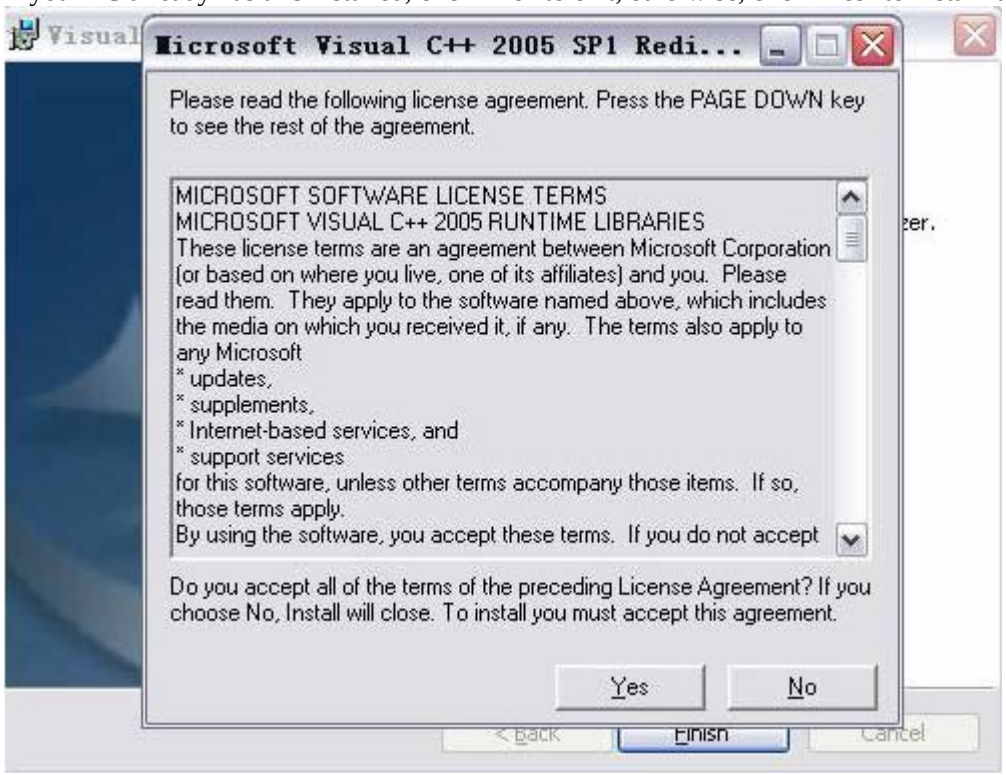
Click "Install" to complete installation, as shown:



Click "Finish" to complete the installation, as shown:


Visualizer - InstallShield Wizard
InstallShield Wizard Completed
The InstallShield Wizard has successfully installed Visualizer. Click Finish to exit the wizard.
< Back
Finish
Cancel

Then you will see the following interface, which is an installation package for 2005 environment. If your PC already has this installed, click "No" to exit, otherwise, click "Yes" to install it.


Microsoft Visual C++ 2005 SP1 Redi...
Please read the following license agreement. Press the PAGE DOWN key to see the rest of the agreement.
MICROSOFT SOFTWARE LICENSE TERMS
MICROSOFT VISUAL C++ 2005 RUNTIME LIBRARIES
These license terms are an agreement between Microsoft Corporation (or based on where you live, one of its affiliates) and you. Please read them. They apply to the software named above, which includes the media on which you received it, if any. The terms also apply to any Microsoft
* updates,
* supplements,
* Internet-based services, and
* support services
for this software, unless other terms accompany those items. If so, those terms apply.
By using the software, you accept these terms. If you do not accept
Do you accept all of the terms of the preceding License Agreement? If you choose No, Install will close. To install you must accept this agreement.
Yes
No

2、SOFTWARE START

Double click the short cut

on the desktop, then click Device, select the right model number, see below:

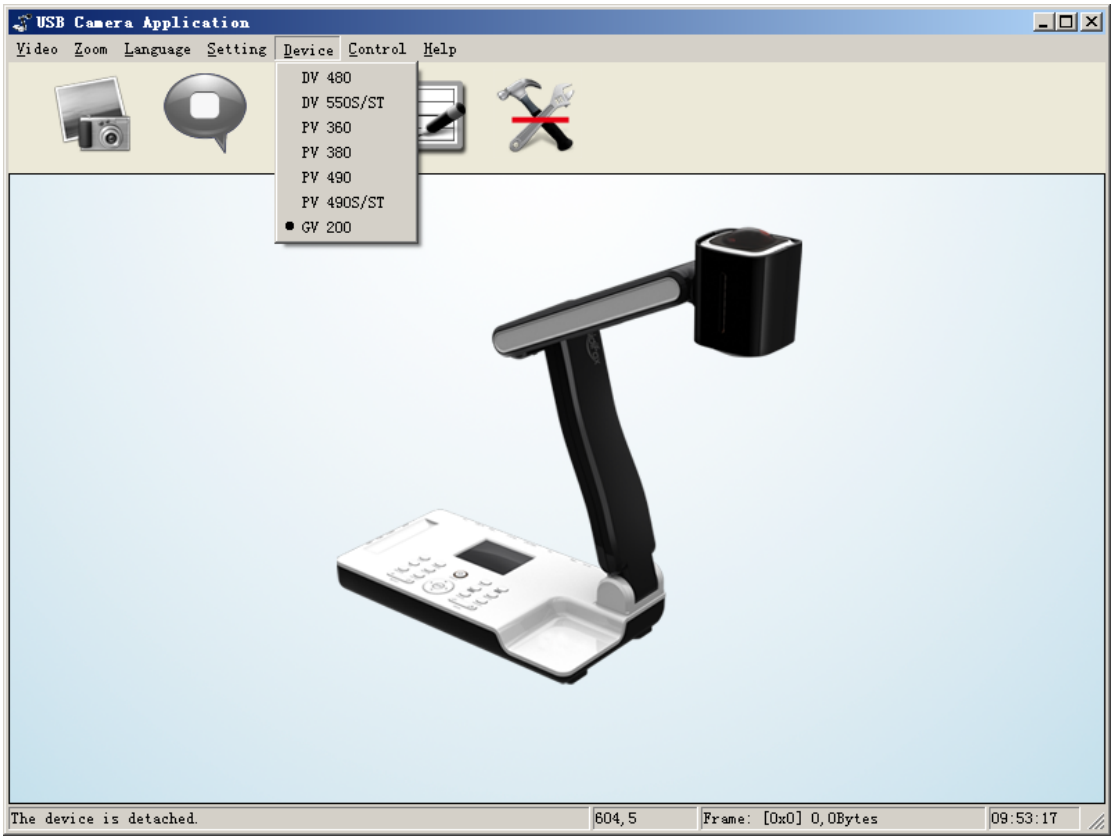
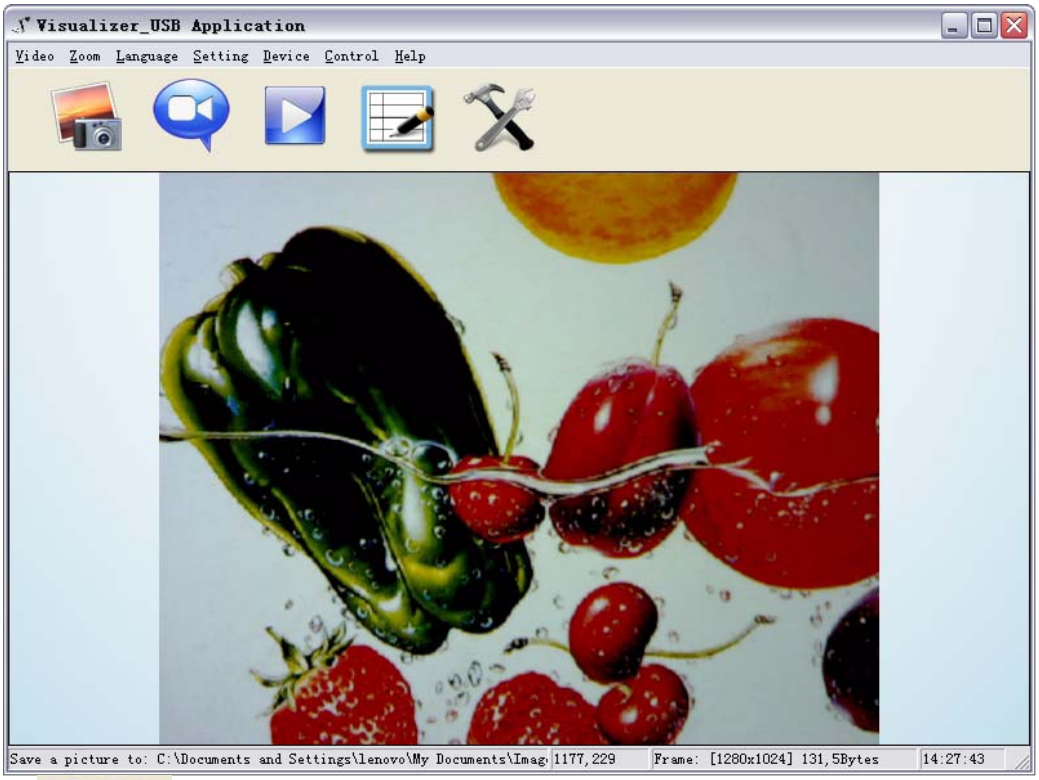


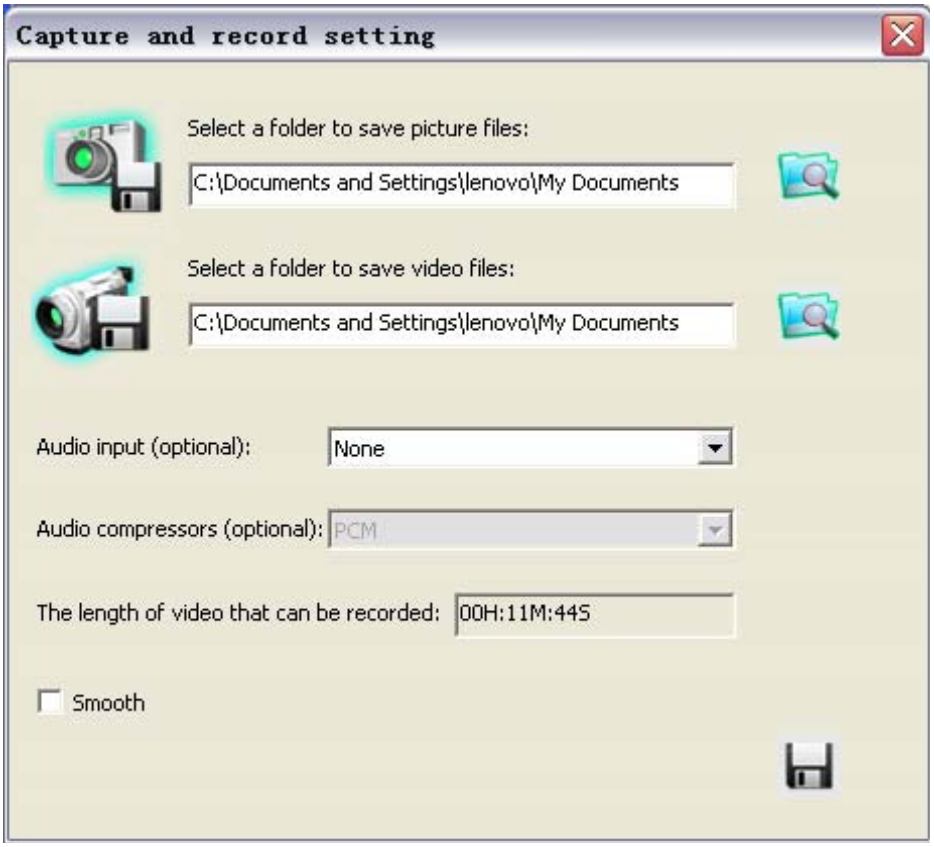
IMAGE CAPTURE AND VIDEO RECORDING：

Left click to capture images. The captured images will be automatically saved into the default destination folder. The path and file name are displayed in software status bar on the bottom of the window. Shown below:


Visualizer_USB Application
Video Zoom Language Setting Device Control Help
Save a picture to: C:\Documents and Settings\lenovo\My Documents\Imag
1177, 229
Frame: [1280x1024] 131, 5Bytes
14:27:43

Left click to start recording. The setting button will changes to and does not work.
The detailed information is displayed on the software status bar in the bottom of the window.
The video is automatically saved in the default folder or pre-set folder.

SETTING：
The captured images and recorded videos will be saved into the folders of Images and Videos respectively, which are created by the system automatically. To set a different path to which the image/video is be to saved, click on the left side of the window, a pop up dialog box appears below.

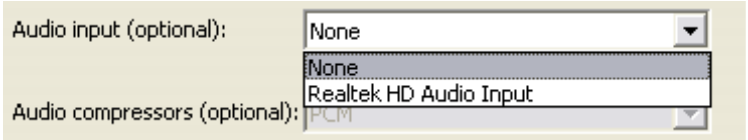


Save the captured images into a different folder

Click the button next to the "select a folder to save picture files" text box to set the path for captured images.

Save the recorded video into a different folder and set up parameters for videos

Click the button next to the "Select a folder to save video files:" text box to set the path for videos. You can also change the video settings. The Audio input (optional) drop down box offers the options of recording video with or without sound. Shown below:

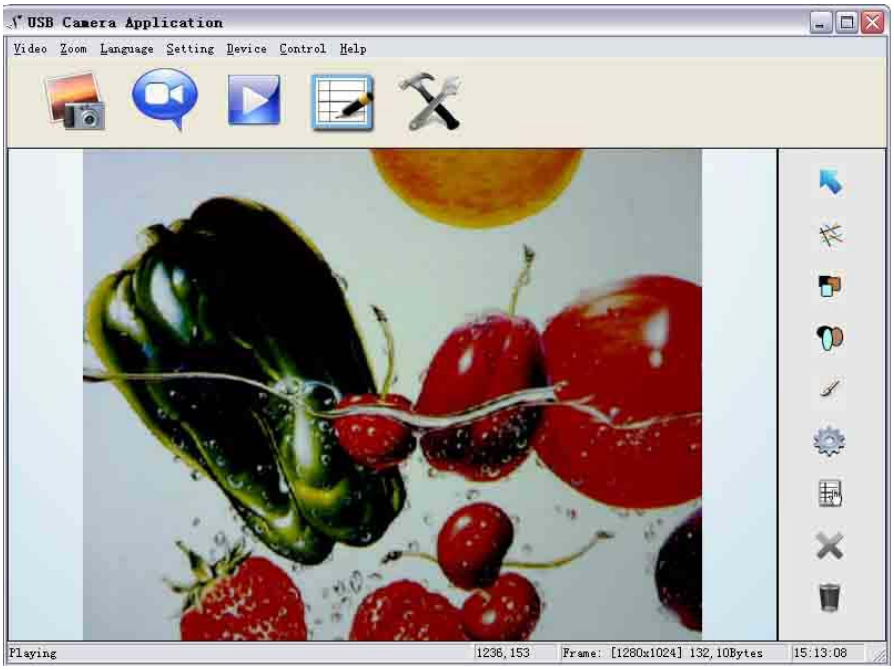


The length of video that can be recorded box displays the longest recording time for videos to be saved in the preset path. Shown below:

Click save to complete setting.

IMAGE MODIFY：

Click , you will see the interface:

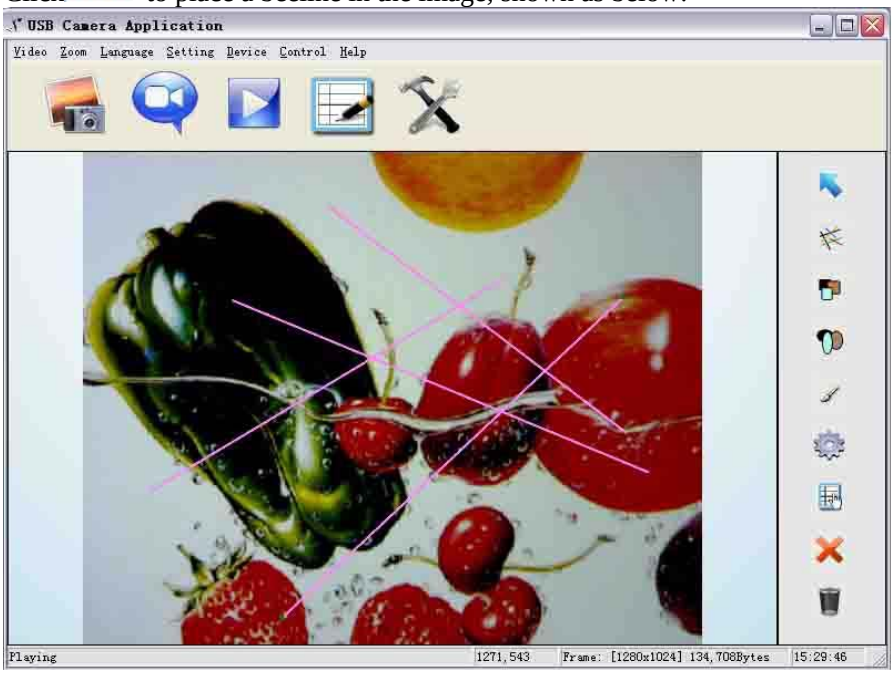


Graphic selection and move

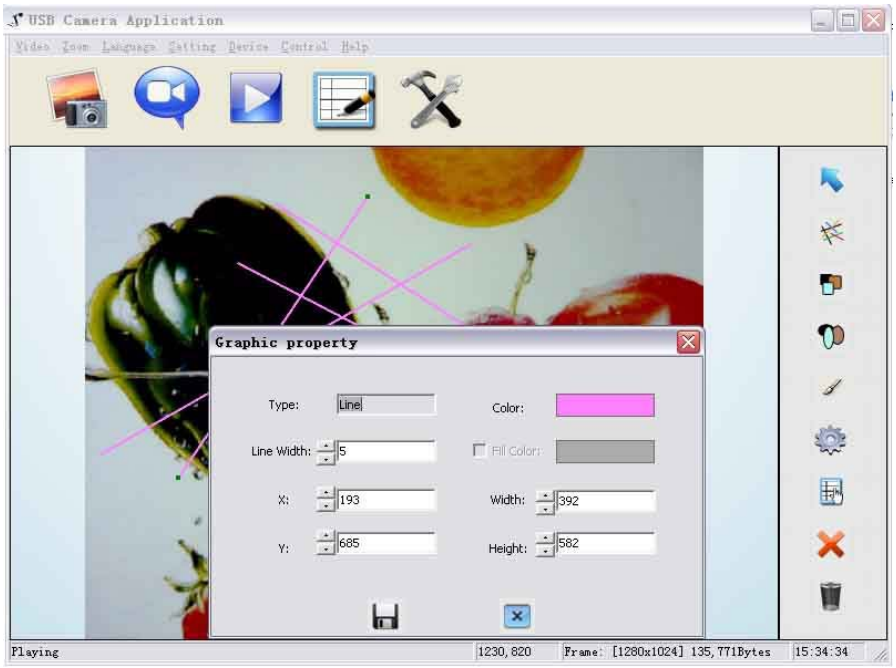
Click to choose a line, circle, rectangle or curve that placed in the image, then move to another place.

Line

Click to place a beeline in the image, shown as below:



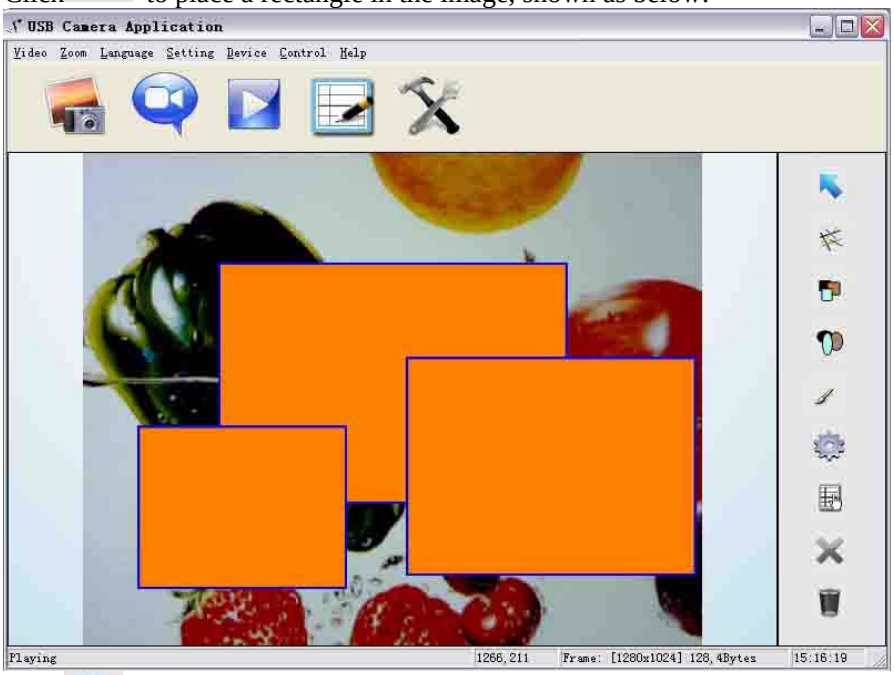
Click to change the setting of the chosen line:



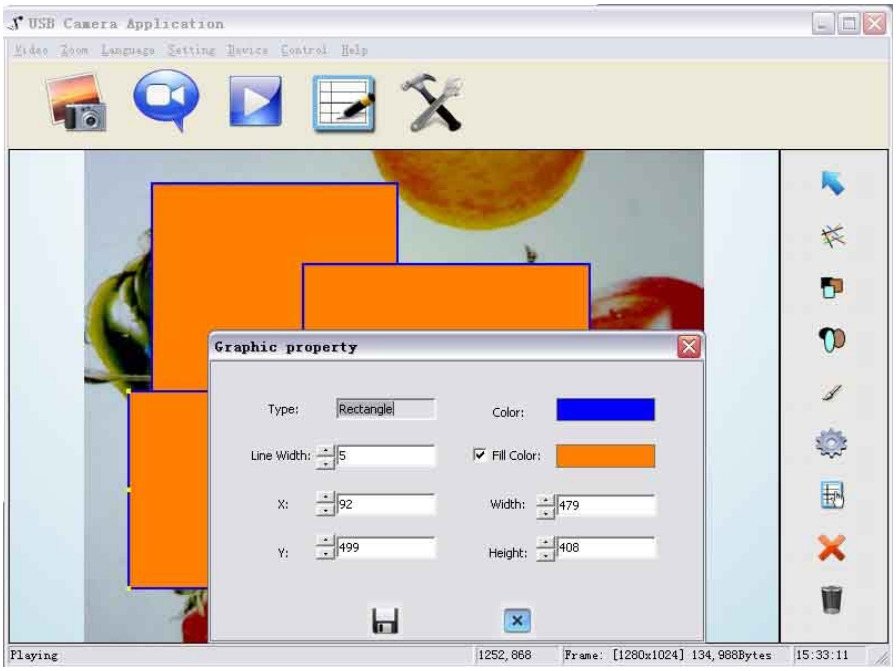
Line width: change the width of the line.
X, Y: change the position of the line.
Color: change the color of the line.
Width, Height: Change the angle of the line.

Rectangle

Click to place a rectangle in the image, shown as below:



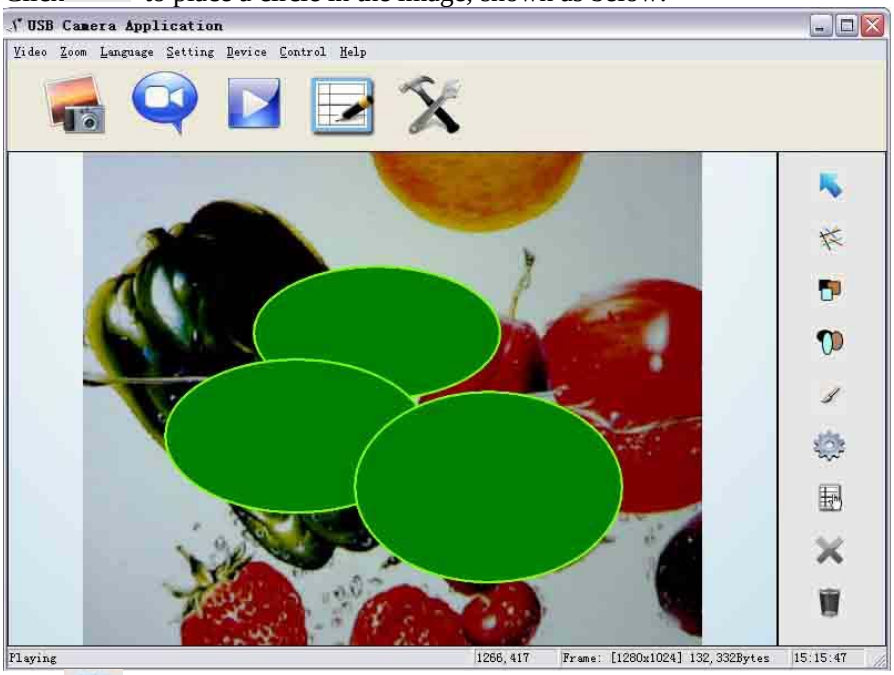
Click to change the setting of the chosen rectangle:



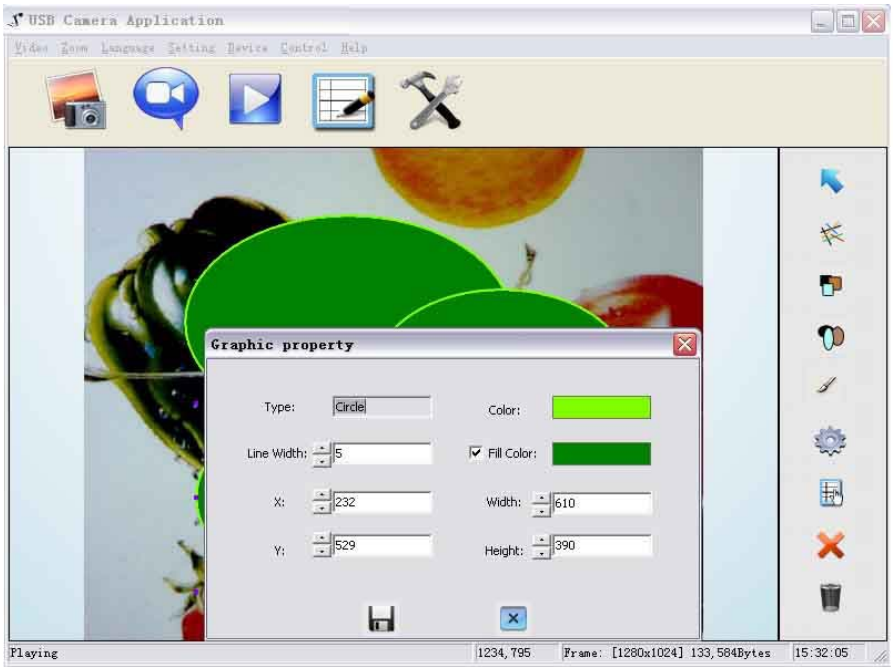
Line width: change the line width of the rectangle.
X, Y: change the position of the rectangle.
Color: change the line color of the rectangle.
Fill Color: Tick it to fill color in the rectangle.
Width, Height: Change the shape of the rectangle by changing the angle of two adjacent lines of the rectangle.

Circle

Click to place a circle in the image, shown as below:



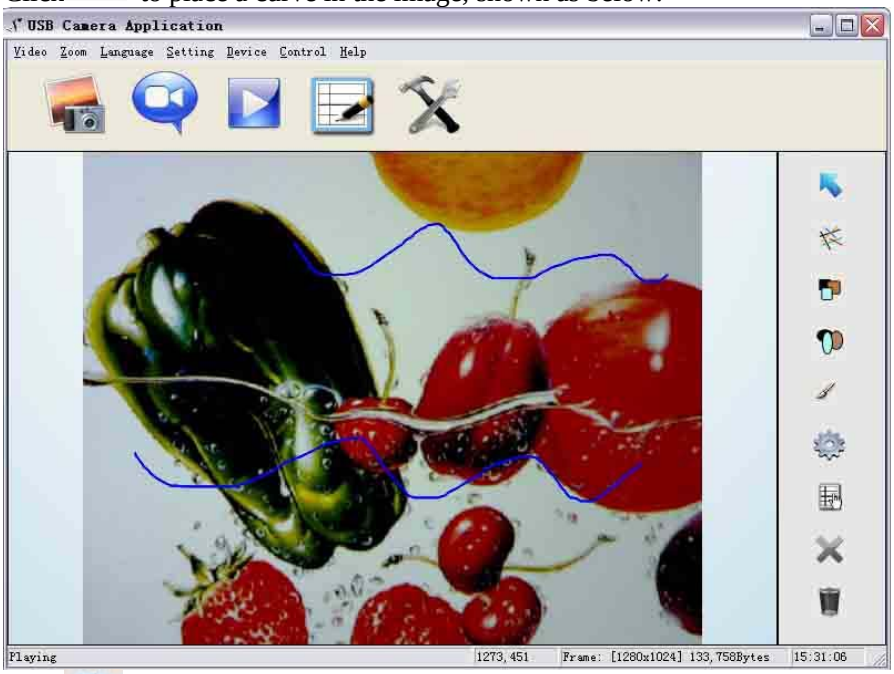
Click to change the setting of the chosen circle:



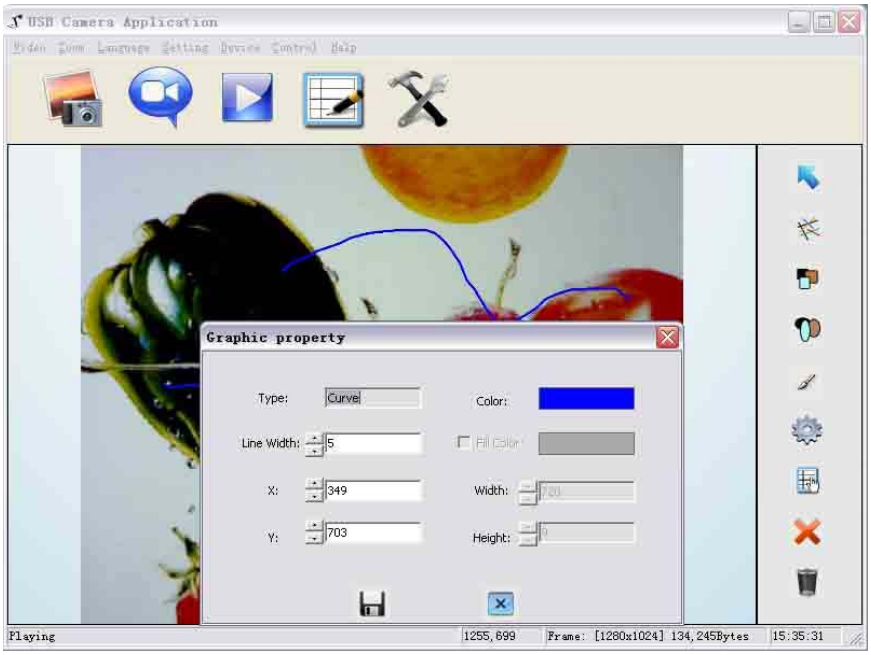
Line width: change the line width of the circle.
X, Y: change the position of the circle.
Color: change the line color of the circle.
Fill Color: Tick it to fill color in the circle.
Width, Height: change the size of the circle.

Curve

Click to place a curve in the image, shown as below:



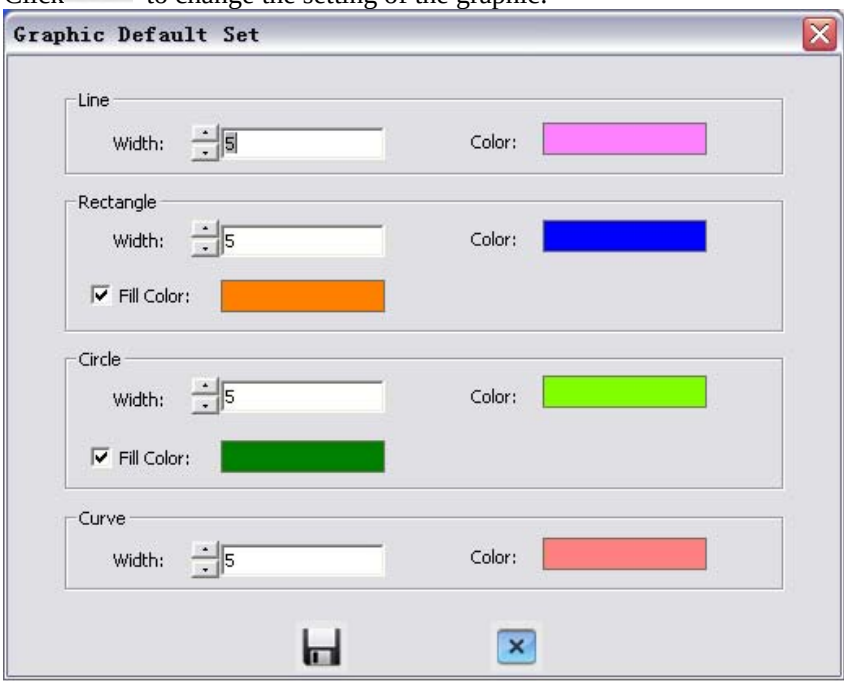
Click to change the setting of the chosen curve:



Line width: change the line width of the curve.
X, Y: change the position of the curve.
Color: change the line color of the curve.

Graphic default setting

Click to change the setting of the graphic:



Graphic delete

Click to delete the chosen graphic.

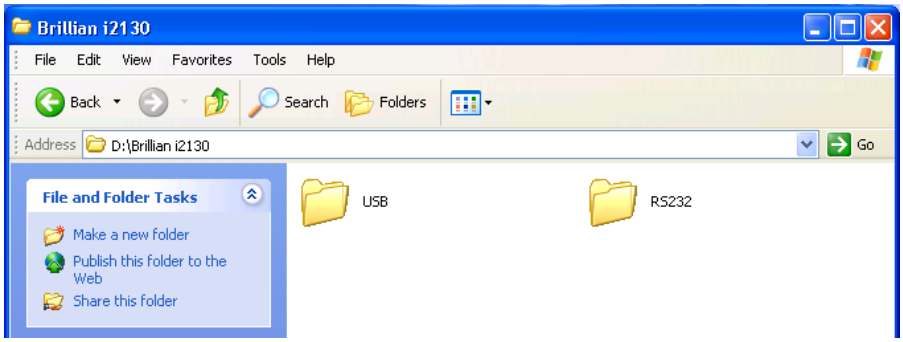
Delete al the graphic

Click to delete all graphic that placed in the image.

RS232 CONTROL

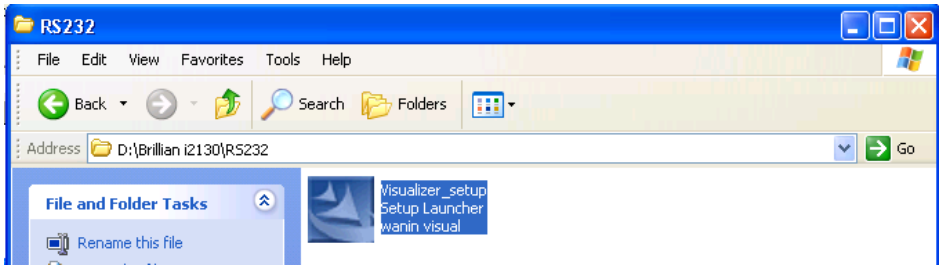
The DV 480 can be controlled from a computer via the RS232 port.

1. Open the DV 480 folder you just created and open the RS232 folder.



2. Connect the computer and the DV 480 with a RS232 cable and turn on the power of the DV 480. If your computer does not have a RS232 port, you need to get a USB to RS232 (serial) cable as a converter. The US customers can purchase this converter from Radio Shack, Best Buy or some other computer stores. You might need to install the driver of the USB-RS232 converter, which should come with the converter.

3. Open the RS232 folder and double click the RS232 software to run the install shield wizard.

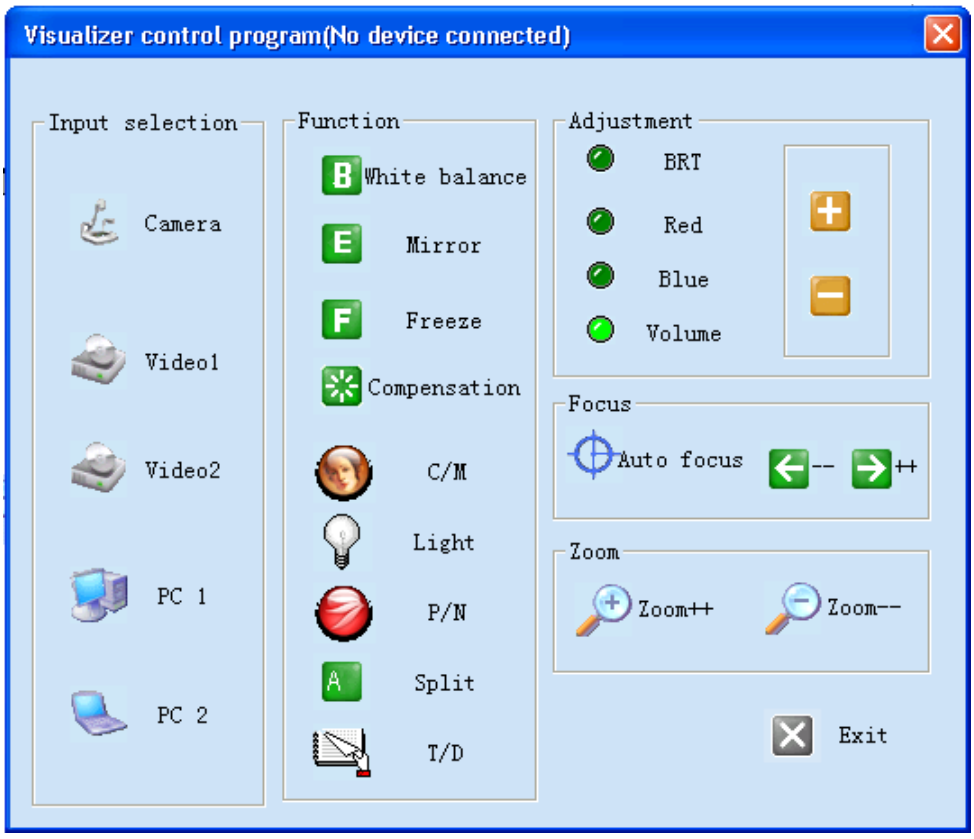


Then you will see the software setup window (Described on Page 15-17)

4. Double click or click *start->All Programs->The DV 480 Control Program->The DV 480* to run the RS232 software, you will see a tool bar:

The definition of each button is **Zoom in, Zoom out, Auto focus, Functions, minimize.**

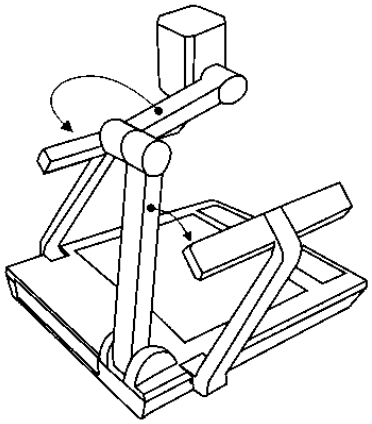
Click Functions, you will see the following control panel.



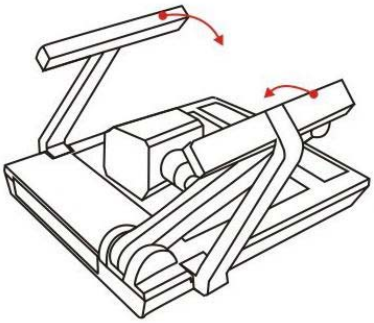
FOLDING THE UNIT

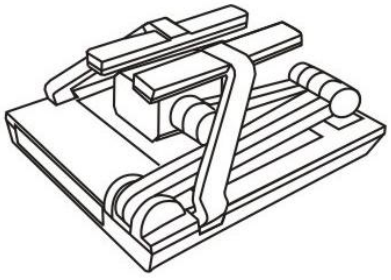
1. **Fold** the right arm light down first onto the base, then the left arm down. **Rotate** the camera head clockwise until the camera head is parallel to the camera stand.

2. **Rotate** the camera head clockwise until the camera head is parallel to the camera stand. Carefully **fold** the camera stand down to the front panel.



3. **Fold** the right arm light down first onto the base, then the left arm down.





Cautions:

a. Don’t lay the unit upside down.

b. Don’t try to stand it on its sides.

c. Don’t try to pick up this unit by pulling the camera stand.

SPECIFICATIONS

Model No.	DV 480
Sensor	1/3" CMOS
Total pixel	2 Megapixel
Zoom	8x optical, 12x digital
Frame rate	15
Shooting area	Max: 13.5" x 10.6" Min: 0.1" x 0.1"
Focus	Auto/manual
Native output signal	SXGA (1280 x 1024)
Converted output signal	XGA (1024 x 768)
Resolution (Horizontal)	More than 750 TV lines
Image mirror	Yes
Image capture	Yes (image: 12 picture)
OSD	Yes
White balance	Yes
Image split	Yes
Color adjustment	Yes
Brightness adjustment	Yes
Black and white/color conversion	Yes
Positive/negative conversion	Yes
Image freeze	Yes
Video scalar	Yes
INPUT PORTS	
VGA	x 2
VIDEO	x 1
S-VIDEO	x 1
AUDIO	x 4
MICROPHONE	x 1
OUTPUT PORTS	
VGA	x 2
VIDEO	x 1
AUDIO	x 1
S-VIDEO	x 1
OTHER PORTS	
USB2.0	x 1（USB camera）
RS232 (computer controllable)	x 1
Remote control	Yes

Light source	Arm Light × 2 (LED) 8”x10” Lightbox (LED)
Operating temperature	32° F to 104° F 0° C to 40° C
Dimensions	Folded: 15.9" x 16.7" x 6.1" 40.4 cm x 42.4 cm x 15.5 cm Setup: 18.7" x16.7" x 22.3" 47.5 cm x 42.4 cm x 56.6 cm
Power supply	12V DC power adapter
Power consumption (Max)	20W
Weight(net)	11lbs/5 kg
Compliance	FCC, CE, RoHS

* Design and specifications are subject to change without notice.

TECHNICAL SUPPORT

Wanin USA is committed to providing highest possible stand of customer service. We can be reached:

By Phone

Call us at 1-877-369-3130. Our technical support staff provides technical assistance from 9:00AM through 5:00PM Pacific Standard Time, Monday through Friday. Please gather the following information before calling:

- Product model name(s) and numbers
- Product serial number(s)
- Detailed questions or problem descriptions.

Online

Technical support is also available online at Wanin USA’s web site at www.waninusa.com. You can enter your questions and concerns through our online form, email us at support@waninusa.com.

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